

# USER'S MANUAL

AN4R2/AN4TR2 MAIN BOARD

Rev: 1.2



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# Important Notice

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## 1. Define the model number

This manual is suitable for two model : AN4T R2 and AN4 R2. The model AN4 R2 is a low cost solution of AN4T R2 by removing the DX4 supported. **Install DX4 CPU on AN4 R2 system board may cause the CPU burned-out.**

## 2. Installing Intel's DX4 CPU (for AN4T R2 only)

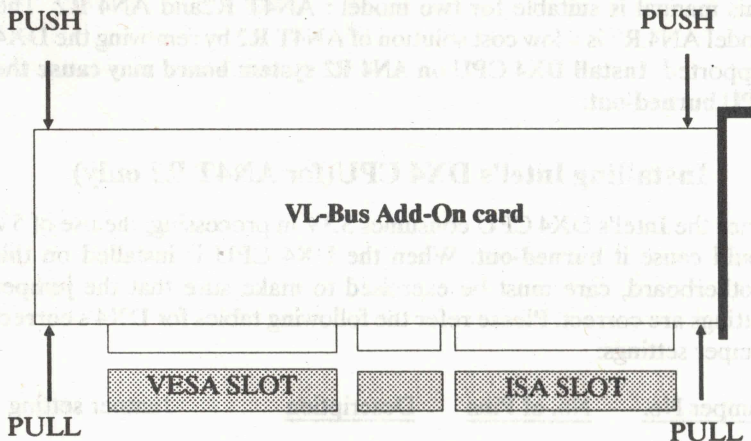
Since the Intel's DX4 CPU consumes 3.3V in processing, the use of 5V could cause it **burned-out**. When the DX4 CPU is installed on this motherboard, care must be exercised to make sure that the jumper settings are correct. Please refer the following tables for DX4's correct jumper settings:

<u>Jumper No.</u>	<u>No. of Pins</u>	<u>Description</u>	<u>Jumper setting</u>
JP28	3	Select DX4 CPU	OFF
		Select other CPU	1-2
JP12	3	Select DX4 CPU	1-2
		Select other CPU	2-3
JP9	3	Select DX4 CPU	1-2
		Select other CPU	2-3

**The jumper setting of Clock Generator for DX4 please check page 2-14.**

### 3. Installing VL-BUS ADD-ON Card

To avoid the damage of the VL-Bus slots, please be careful when you insert/remove the VL-Bus Add-on cards. To insert/remove the card, you should PUSH/PULL the both edges of the card in uniform force.



# High Performance Cache 486 VESA Mainboard

## USER'S MANUAL

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# Chapter 1

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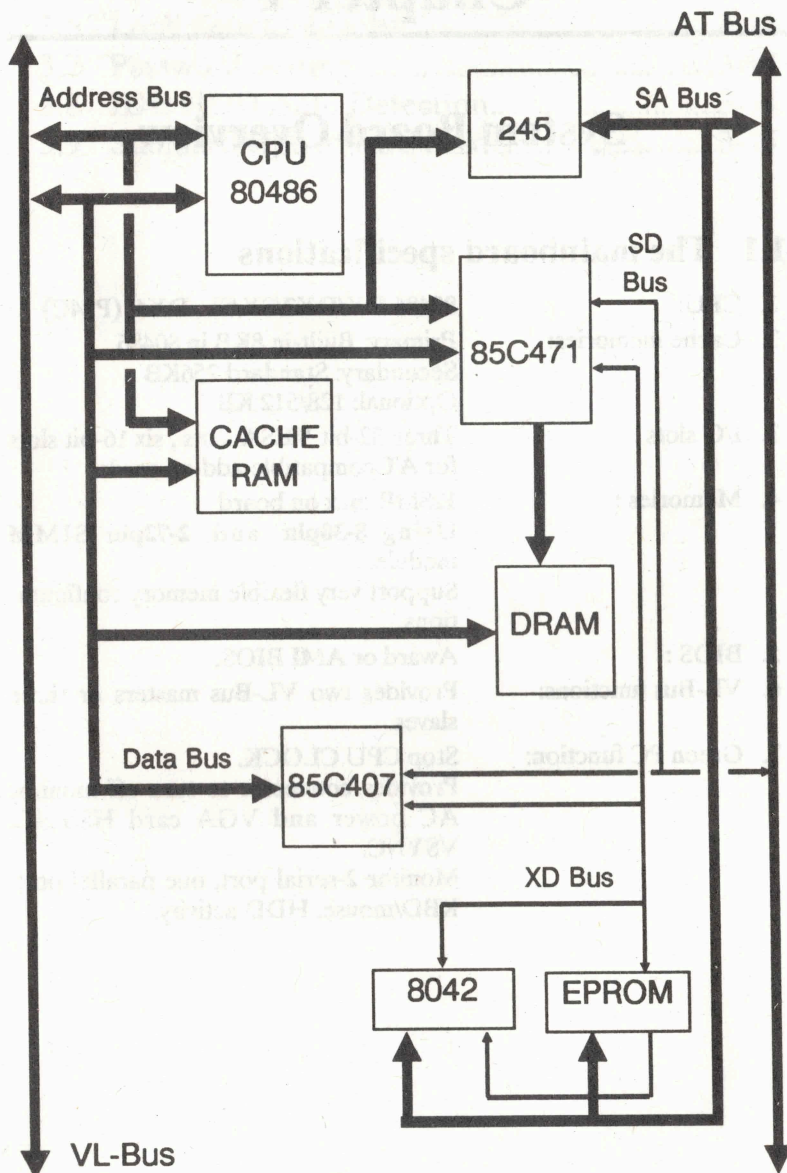
## System Board Overview

### 1.1 The mainboard specifications

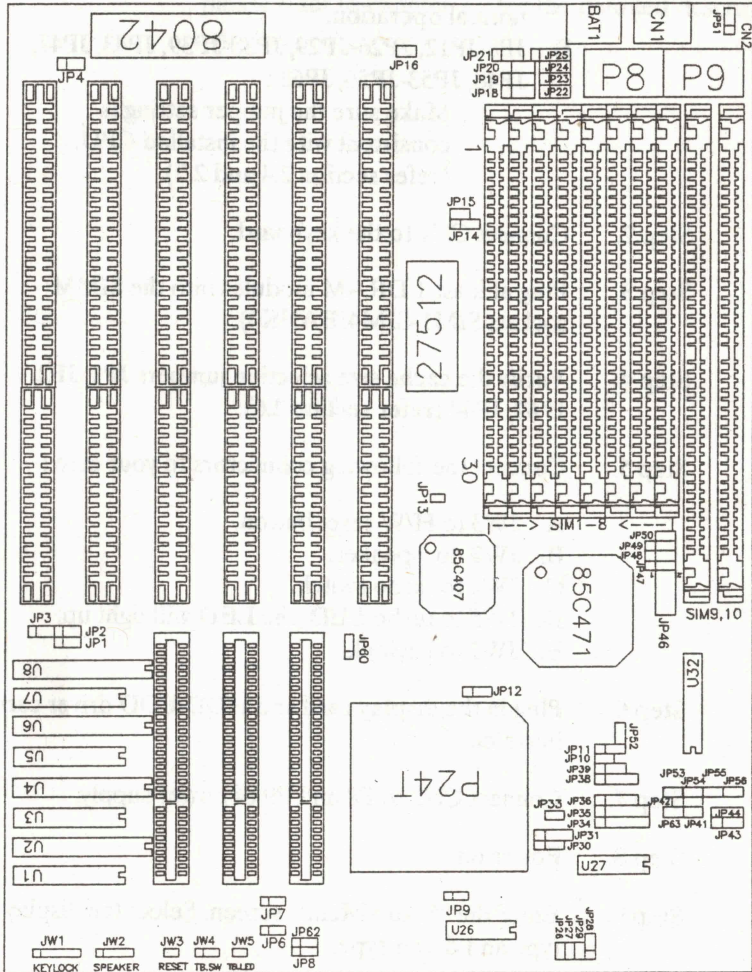
1. CPU: 80486 DX/DX2/SX/SL, DX4\*(P24C)
2. Cache memories: Primary: Built-in 8KB in 80486  
Secondary: Standard 256KB  
Optional: 128/512 KB
3. I/O slots : Three 32-bit VESA slots , six 16-bit slots  
for AT compatible add-on cards.
4. Memories : 128MB max on board  
Using 8-30pin and 2-72pin SIMM  
module.  
Support very flexible memory configurations.
5. BIOS : Award or AMI BIOS.
6. VL-Bus functions: Provides two VL-Bus masters or three  
slaves.
7. Green PC function: Stop CPU CLOCK.  
Provides connector to turn off monitor  
AC power and VGA card HSYNC,  
VSYNC.  
Monitor 2-serial port, one parallel port,  
KBD/mouse, HDD activity.

\* Note: DX4\* is AN4T R2 model only.

## 1.2 The system block diagram



### 1.3 Placement



### Figure 1-1

## 1.4 Quick reference for installation

Step 1. Please verify the following jumpers:

A. JP21 : A jumper at pin "1-2" for CMOS RAM normal operation.

B. JP8-JP12, JP26-JP29, JP30-JP39, JP43, JP47, JP48, JP53-JP56, JP63 :

Make sure the jumper setting is consistent with the installed CPU.  
(refer section 2.4 and 2.7)

Step 2. Connect CN1 to the keyboard.

Step 3. Plug at least 1 DRAM modules into the SIMM sockets SIM1-SIM4(BANK0).

Step 4. Verify the cache size selection jumpers JP1, JP2, JP42, JP44 (refer section 2.6).

Step 5. Connect the following connectors to your case :

A. JW3 to H/W reset button.

B. JW2 to speaker.

C. JW4 to turbo switch.

D. JW5 to turbo LED, the LED will light up.

E. JW1 to keylock.

Step 6. Plug in the display card and HDD/FDD driver card into slots.

Step 7. Connect CN2 to P8 and P9 of power supply.

Step 8. Power on.

Step 9. Enter the "Setup Menu" screen. Select the display type and driver type.

Step 10. Quit the "Setup Menu" screen and then select "SAVE & EXIT SETUP" from BIOS Main Menu.

Step 11. The system will re-boot.

**Step 12.** If you can see the DOS prompt shown on the screen, the installation is completed O.K.

**Note :** If you have any problem during the installation, please refer to chapter 2.2 for the detailed description.

## System Board Overview

Step 1: If you have the 100 MHz processor, you can skip this step.

Step 2: The installation is complete.

If you have any questions about the installation, please refer to Chapter 2 for the detailed description.

Step 3: The installation is complete.

Step 4: The installation is complete.

Step 5: The installation is complete.

Step 6: The installation is complete.

Step 7: The installation is complete.

Step 8: The installation is complete.

Step 9: The installation is complete.

Step 10: The installation is complete.

Step 11: The installation is complete.

Step 12: The installation is complete.

Step 13: The installation is complete.

Step 14: The installation is complete.

Step 15: The installation is complete.

Step 16: The installation is complete.

Step 17: The installation is complete.

Step 18: The installation is complete.

Step 19: The installation is complete.

Step 20: The installation is complete.

Step 21: The installation is complete.

Step 22: The installation is complete.

Step 23: The installation is complete.

Step 24: The installation is complete.

Step 25: The installation is complete.

Step 26: The installation is complete.

Step 27: The installation is complete.

Step 28: The installation is complete.

Step 29: The installation is complete.

Step 30: The installation is complete.

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# Chapter 2

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## Hardware Setup

This chapter describes the mainboard's connectors and how to set the mainboard's jumpers.

### 2.1 Power Precautions

You Should take the following precautions before you begin working with the mainboard and its components:

- Turn off the mainboard's power, and unplug the power cord.
- Unplug all cables that connect the mainboard to any external devices.

### 2.2 Connectors

You attach system components and case devices to the mainboard's connectors. A description of each connector and its pin assignments follows. Refer to Figure 1-1 for connector locations on the mainboard.

<b>Caution:</b> <i>Make sure you first turn off all power to the system before attaching components to the mainboard.</i>
---

## Hardware Setup

Connector Name	Pin Assignments	Description
External Battery Connector: JP25 (4 Pins)	Pin 1: 6V battery input Pin 2: NC. Pin 3: Ground. Pin 4: Ground.	In case the on-board battery is out of work, the user can remove it from the mainboard and connect a 6V external battery to the 4 pin J1
Turbo Connector: JW4 (3 Pins)	Pin 1: +5VDC. Pin 2: Turbo signal. Pin 3: Ground.	1-2: Low speed mode. 2-3: Turbo mode. Connect the pin2, pin3 to the cable of the chassis' turbo button.
Turbo LED Connector JW5 (2 Pins)	Pin 1: Cathode terminal of LED. Pin 2: Anode terminal of LED.	If the connection is correct, the turbo LED will light up when the system is in turbo speed mode. Otherwise the turbo LED will be off.
Hardware Reset Connector: JW3 (2 Pins)	Pin 1: Reset input Pin 2: Ground	Connect this switch to the cable of the chassis' reset button. Press and hold the reset button for at least one second to reset the system.
Keylock and Power LED connector: JW1 (5 Pins)	Pin 1: +5VDC. Pin 2: No connection. Pin 3: Ground. Pin 4: Keyboard inhibit Signal. Pin 5: Ground.	Connect this switch to the cable of the chassis' keylock button.
Speaker connector: JW2 (4 Pins)	Pin 1: Sound signal. Pin 2: Ground. Pin 3: Ground. Pin 4: +5VDC.	Connect to the speaker connector in the front panel of the chassis.
Keyboard connector: CN1 (5 Pins)	Pin 1: Keyboard clock. Pin 2: Keyboard data. Pin 3: No connection. Pin 4: Ground. Pin 5: +5VDC.	Connect to the Keyboard connector.

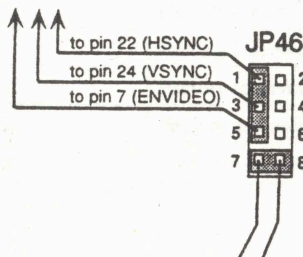
Connector Name	Pin Assignments	Function
Power input connector: CN2 (12 Pins)	Pin 1: Powergood. Pin 2: +5V. Pin 3: +12V. Pin 4: -12V. Pin 5: Ground Pin 6: Ground Pin 7: Ground Pin 8: Ground Pin 9: -5V Pin10: +5V Pin11: +5V Pin12: +5V.	Connect to the power connector from the power supply. Usually, the color marking of the power connector cables will be as listed above.  Connect the power connector to the exact position. Any mistake will cause the mainboard power supply or add-on card to be damaged.
Monitor AC Power controller	Pin 1: Signal Pin 2: Ground	Connect to Green PC power supply connector.

## JP46 - Green Video Connector

Connector JP46 can provide Green PC control of a monitor's AC power and a VGA card's HSYNC and VSYNC. Attach a cable from the VGA card's feature connector to pin's 1, 3, and 5, and attach a Green power supply's cable to pin's 7 and 8 as shown below.

Note that pin numbers 1, 3, and 5 of JP46 correspond to pin numbers 22 (HSYNC), 24 (VSYNC), and 7 (ENVIDEO) of the VGA card's feature connector. Refer to your VGA manual for more information. Attach cables as below.

3-pin cable to VGA card's  
Feature connector



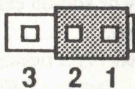
Cable from Green  
Power Supply

## 2.3 Jumper Switches

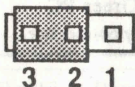
You set jumper switches on the mainboard to configure various hardware options. See Figure 1-1 for jumper locations.

Throughout this section the following symbols are used to indicate jumper settings.

For 3-pin jumpers, the symbols below are used:



Short Pins 1 and 2 with a jumper cap.



Short Pins 2 and 3 with a jumper cap.

For 2-pin jumpers, the following symbols are used:



Place the jumper cap over the two pins of the jumper to Short the jumper.

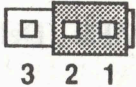
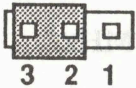


Remove the jumper cap to Open the jumper cap

**Note:** To avoid losing jumper caps, attach the removed jumper cap to one of the jumper pins.

## JP21 - CMOS Discharge Jumper

Jumper JP21 discharges CMOS memory. When you install the main-board, make sure this jumper is set for Normal Operation (short pins 1-2). Set the jumper as below.

Setting	JP21
Normal Operation (Default)	
Discharge CMOS	

## JP3, JP13, JP14, JP15, JP16, JP41, JP49: Factory Reserved



These jumpers are for the manufacturer's use only. Make sure these jumpers are set at their default settings as shown below.

Jumper No.	No. of Pins		Description	Default Setting
JP3	3		Factory reserved	2-3
JP4	3		Factory reserved	1-2
JP13	2		Factory reserved	ON
JP14	3		Factory reserved	1-2
JP15	2		Factory reserved.	OFF
JP16	2		Factory reserved.	ON
JP41	2		Factory reserved	OFF
JP49	3		Factory reserved	1-2

## JP7 - VL-Bus Jumper (VESA mode only)

Set jumper JP7 to configure the mainboard's VESA Local Bus. See Figure 1-1 for jumper locations.

Set jumper JP7 to match the mainboard's CPU speed.

CPU Frequency	JP7
$\leq 33$ MHz (Default)	 3 2 1
$> 33$ MHz	 3 2 1

Item	Description	Default Setting
JP1	Factory reserved	
JP2	Factory reserved	
JP3	Factory reserved	
JP4	Factory reserved	
JP5	Factory reserved	
JP6	Factory reserved	
JP7	Factory reserved	
JP8	Factory reserved	
JP9	Factory reserved	
JP10	Factory reserved	

## 2.4 Installation of CPU

The mainboard is equipped with a 237 pin socket for various CPUs: 80486 SX/DX/DX2/486SL, M7, DX4 to be selected by following jumpers :

Jumper setting	JP9	JP12	JP30	JP31	JP33	JP34	JP35	JP36	JP38	JP39	JP43	JP47	JP48	JP63
486DX/DX2(SL)*	2-3	2-3	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF
486SX/SL	2-3	2-3	2-3	OFF	OFF	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF
M7(5V)	2-3	2-3	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF
486DX4**	1-2	1-2	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF
AMD 486DX2 (3.45V)	1-2	1-2	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	1-2
M7 DX2-Vxx (3.xxV)	1-2	1-2	1-2	3-4	ON	2-3	2-3	1-2	2-3	2-3	1-2	1-2	2-3	OFF

Note: 486DX/DX2(SL)\* is default setting.  
DX4\*\* is for AN4T R2 model only.

CPU Type	JP53	JP54	JP55	JP56	Note
DX4-75, Cx486DX2-V50	1-2	OFF	OFF	OFF	3.3V
DX4-100, AMD DX2/DX4	OFF	1-2	OFF	OFF	3.45V
Cx486DX2-V66	OFF	OFF	1-2	OFF	3.6V
Cx486DX2-V80	OFF	OFF	OFF	1-2	4.0V

## 2.5 Installation of DRAMs

The system board supports four banks of Memory with/without parity bit of single side or double side 72 pin SIMM for easy upgrade the system memory.

The possible combinations of bank selection are as below:

Item	JP18	JP19	JP20	JP22	JP23	JP24	JP50	JP51	Bank 0	Bank 1	Bank2	Bank3
1.	*1-2	*1-2	*OFF	*1-2	*OFF	*1-2	*OFF	*OFF	SIM1-4(B)	SIM5-8(B)	SIM9(S)	SIM10(S)
2.	1-2	1-2	OFF	1-2	1-2	OFF	OFF	OFF	SIM1-4(B)	SIM5-8(B)	SIM9(D)	XXXXXX
3.	1-2	OFF	OFF	1-2	2-3	OFF	OFF	OFF	SIM1-4(B)	SIM9(D)	XXXXXX	XXXXXX
4.	1-2	OFF	OFF	1-2	1-2	2-3	OFF	OFF	SIM1-4(B)	SIM10(S)	SIM9(D)	XXXXXX
5.	2-3	2-3	OFF	2-3	OFF	2-3	ON	2-3	SIM9(D)	SIM10(D)	SIM1-4(B)	SIM5-8(B)
6.	OFF	OFF	ON	2-3	2-3	OFF	OFF	1-2	SIM9(D)	SIM10(D)	XXXXXX	XXXXXX
7.	1-2	OFF	OFF	1-2	1-2	2-3	OFF	OFF	SIM1-4(B)	SIM10(S)	SIM9(S)	XXXXXX
8.	2-3	2-3	OFF	2-3	OFF	2-3	OFF	OFF	SIM9(S)	SIM10(S)	SIM1-4(B)	SIM5-8(B)

Note: (B) 4pcs of 30 pin SIMM  
 (S) Single side 72pin SIMM  
 (D) Double side 72pin SIMM

256K-S	=	256K x 32bits	=	1MBytes
1M-S	=	1M x 32bits	=	4MBytes
4M-S	=	4M x 32bits	=	16MBytes
16M-S	=	16M x 32bits	=	64MBytes
512K-D	=	2 x 256K x 32bits	=	2MBytes
2M-D	=	2 x 1M x 32bits	=	8MBytes
8M-D	=	2 x 4M x 32bits	=	32MBytes
256K-B	=	4 x 256K x 8bits	=	1MBytes
1M-B	=	4 x 1M x 8bits	=	4MBytes
4M-B	=	4 x 4M x 8bits	=	16MBytes
16M-B	=	4 x 16M x 8bits	=	64MBytes

Item 1: 30pin x 8 and singal side 72pin.

SIM1-4	SIM5-8	SIM9	SIM10	TOTAL
256K-B	-----	-----	-----	1MB
256K-B	256K-B	-----	-----	2MB
256K-B	256K-B	1M-S	-----	6MB
256K-B	256K-B	1M-S	1M-S	10MB
256K-B	256K-B	4M-S	-----	18MB
1M-B	1M-B	-----	-----	8MB
1M-B	1M-B	1M-S	-----	12MB
1M-B	1M-B	1M-S	1M-S	16MB
1M-B	1M-B	4M-S	-----	24MB
1M-B	1M-B	4M-S	4M-S	40MB
1M-B	4M-B	4M-S	-----	36MB
1M-B	16M-B	-----	-----	68MB
1M-B	1M-B	16M-S	-----	72MB
4M-B	-----	-----	-----	16MB
4M-B	4M-B	-----	-----	32MB
4M-B	4M-B	4M-S	-----	48MB
4M-B	4M-B	4M-S	4M-S	64MB
4M-B	16M-B	-----	-----	80MB
4M-B	4M-B	16M-S	-----	96MB
16M-B	-----	-----	-----	64MB
16M-B	16M-B	-----	-----	128MB

Item 2: 30pin x 8 and one duple side 72pin.

SIM1-4	SIM5-8	SIM9	SIM10	TOTAL
256K-B	256K-B	512K-D	-----	4MB
1M-B	1M-B	8M-D	-----	40MB
4M-B	4M-B	8M-D	-----	64MB

Item 3: 30pin x 4 and one duple side 72pin.

SIM1-4	SIM5-8	SIM9	SIM10	TOTAL
1M-B	-----	8M-D	-----	36MB
4M-B	-----	8M-D	-----	48MB

Item 4: 30pin x 4 and one single side 72pin, one double side 72pin.

SIM1-4	SIM5-8	SIM9	SIM10	TOTAL
256K-B	-----	512K-D	256K-S	4MB
1M-B	-----	8M-D	1M-S	40MB
4M-B	-----	8M-D	4M-S	64MB

Item 5: 30pin x 8 and two double side 72pin.

SIM1-4	SIM5-8	SIM9	SIM10	TOTAL
1M-B	-----	512K-D	512K-D	8MB
1M-B	1M-B	512K-D	512K-D	12MB
4M-B	-----	512K-D	512K-D	20MB
1M-B	4M-B	512K-D	512K-D	24MB
4M-B	4M-B	512K-D	512K-D	36MB

Item 6: two double side 72pin or one double side 72pin, one single side 72pin.

SIM1-4	SIM5-8	SIM9	SIM10	TOTAL
-----	-----	512K-D	-----	2MB
-----	-----	512K-D	512K-D	4MB
-----	-----	512K-D	1M-S	6MB
-----	-----	512K-D	4M-S	18MB
-----	-----	2M-D	-----	8MB
-----	-----	2M-D	2M-D	16MB
-----	-----	8M-D	-----	32MB
-----	-----	8M-D	8M-D	64MB

Item 7: 30pin x 4 and two single side 72pin.

SIM1-4	SIM5-8	SIM9	SIM10	TOTAL
256K-B	-----	-----	-----	1MB
256K-B	-----	-----	256K-S	2MB
256K-B	-----	1M-S	256K-S	6MB
256K-B	-----	4M-S	256K-S	18MB
1M-B	-----	-----	-----	4MB
1M-B	-----	-----	1M-S	8MB
1M-B	-----	1M-S	1M-S	12MB
1M-B	-----	-----	4M-S	20MB
1M-B	-----	4M-S	1M-S	24MB
1M-B	-----	4M-S	4M-S	36MB
4M-B	-----	-----	-----	16MB
4M-B	-----	-----	4M-S	32MB
4M-B	-----	4M-S	4M-S	48MB
256K-B	-----	-----	1M-S	5MB
256K-B	-----	-----	4M-S	17MB
256K-B	-----	-----	16M-S	65MB
1M-B	-----	-----	16M-S	68MB
1M-B	-----	16M-S	1M-S	72MB
4M-B	-----	-----	16M-S	80MB
4M-B	-----	16M-S	4M-S	96MB
16M-B	-----	-----	-----	64MB
16M-B	-----	-----	16M-S	128MB

Item 8: 30pin x 8 and two single side 72pin.

SIM1-4	SIM5-8	SIM9	SIM10	TOTAL
-----	-----	256K-S	-----	1MB
-----	-----	256K-S	256K-S	2MB
1M-B	-----	256K-S	256K-S	6MB
1M-B	1M-9	256K-S	256K-S	10MB
4M-B	-----	256K-S	256K-S	18MB
-----	-----	1M-S	-----	4MB
-----	-----	1M-S	1M-S	8MB
1M-B	-----	1M-S	1M-S	12MB
1M-B	1M-B	1M-S	1M-S	16MB
-----	-----	1M-S	4M-S	20MB
4M-B	-----	1M-S	1M-S	24MB
4M-B	-----	1M-S	4M-S	36MB
4M-B	4M-B	1M-S	1M-S	40MB
-----	-----	4M-S	-----	16MB
-----	-----	4M-S	4M-S	32MB
4M-B	-----	4M-S	4M-S	48MB
4M-B	4M-9	4M-S	4M-S	64MB
-----	-----	256K-S	1M-S	5MB
-----	-----	256K-S	4M-S	17MB
-----	-----	256K-S	16M-S	65MB
-----	-----	1M-S	16M-S	68MB
16M-B	-----	1M-S	1M-S	72MB
-----	-----	4M-S	16M-S	80MB
16M-B	-----	4M-S	4M-S	96MB
-----	-----	16M-S	-----	64MB
-----	-----	16M-S	16M-S	128MB

## 2.6 Installation of Cache memory

This mainboard supports very flexible Cache SRAM configuration: 128KB, 256KB, and 512KB.

Main Board Cache Size		128KB	256KB		512KB
TAG SRAM	Location	U32			
	Type	8Kx8	32Kx8		
Data SRAM	Location	U2, U4, U6, U8	U1-U8	U2, U4 U6, U8	U2, U4, U6, U8
	Type	32Kx8		64Kx8	128Kx8
Jumper setting	JP1	1-2	2-3	1-2	1-2
	JP2	1-2	2-3	1-2	1-2
	JP44	1-2	2-3	2-3	2-3
	JP42	1-2	1-2	1-2	2-3

## 2.7 Jumper setting of Clock Generator for CPU frequency selection

### a.) AVASEM AV9107 Clock Generator (U26)

	JP8	JP10	JP11	JP26	JP27	JP28	JP29
20MHz	2-3	OFF	OFF	ON	OFF	1-2	ON
25MHz	2-3	OFF	OFF	OFF	ON	1-2	ON
33MHz	2-3	OFF	OFF	ON	ON	1-2	OFF
40MHz	2-3	OFF	OFF	OFF	OFF	1-2	ON
DX4 25/75	2-3	OFF	1-2	OFF	ON	OFF	ON
DX4 33/83	2-3	ON	OFF	ON	ON	OFF	OFF
DX4 33/100	2-3	OFF	1-2	ON	ON	OFF	OFF

### b.) MXIC MX8315 Clock Generator (U27)

	JP8	JP10	JP11	JP26	JP27	JP28	JP29
20MHz	1-2	OFF	OFF	OFF	OFF	1-2	OFF
25MHz	1-2	OFF	OFF	OFF	ON	1-2	OFF
33MHz	1-2	OFF	OFF	ON	ON	1-2	ON
40MHz	1-2	OFF	OFF	ON	ON	1-2	OFF
DX4 25/75	1-2	OFF	1-2	OFF	ON	OFF	ON
DX4 33/83	1-2	ON	OFF	ON	ON	OFF	ON
DX4 33/100	1-2	OFF	1-2	ON	ON	OFF	ON

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## Chapter 3

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### Award BIOS Setup

All personal computer use a BIOS, or Basic Input/Output system, to provide control for the hardware functions. When system is powered on or reset, the CPU is reset and BIOS will do the following:

- Self-test on CPU.
- Verify ROM BIOS checksum.
- Verify CMOS configuration chip.
- Initialize timer.
- Initialize DMA controller.
- Verify RAM memory.
- Install all BIOS function call utilities.
- Verify/initialize all system configurations, like keyboard, floppy drive, hard disk, initialize EGA or VGA if there is any.
- Hook to the add-in BIOS or expansion BIOS to perform initialization and driver link to the system.

Award's BIOS ROM has a built-in setup program that allow users to modify the basic system configuration. This type of information is stored in battery-backed RAM so that the setup information is retained when the power is turned off. When the system is power on or reset, the Award BIOS will display a copyright message on the screen, then the BIOS will perform the system diagnostics test and initialization. When all of the above tests have been passed, the message:

**"TO ENTER SETUP BEFORE BOOT PRESS CTRL-ALT-ESC OR DEL KEY"**

is displayed. If the [Del] key or Ctrl-Alt-Esc is pressed, the screen will be cleared and then the following message will be shown:

ROM ISA BIOS (XXXXXXXXXX)  
CMOS SETUP UTILITY  
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP LOAD BIOS DEFAULTS	LOAD SETUP DEFAULTS PASSWORD SETTING IDE HDD AUTO DETECTION SAVE & EXIT SETUP EXIT WITHOUT SAVING
Esc : Quit F10 : Save & Exit Setup	↓ ↑ → ← : Select Item (Shift)F2 : Change Color
Description of each function	

**Figure 3-1 Main Menu**

### 3.1 Standard CMOS Setup Menu

The items in Standard CMOS Setup Menu are divided into several categories. Each category includes none, one or more than one setup items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

Date (mm:dd:yy) : Wed, Apr 21 1993							
Time (hh:mm:ss) : 14:53:31							
	CYLS	HEADS	PRECOMP	LANDZONE	SECTORS	MODE	
Drive C: None ( 0Mb)	0	0	0	0	0	-----	
Drive D: None ( 0Mb)	0	0	0	0	0	-----	
Drive A: 1.2M, 5.25 in.				Base Memory: 640K Extended Memory : 3328K Expanded Memory: 0K Other Memory: 128K <hr/> Total Memory: 4096K			
Drive B: None							
Video : MONO							
Halt On : All Errors							
Esc : Quit		↓ ↑ → ← : Select Item		PU/PD/ +/-: Modify			
F1 : Help		(Shift)F2 : Change Color		F3 : Toggle Calendar			

**Figure 3-2 Standard CMOS Setup Menu**

The setup program is completely menu-driven:

1. Use arrow keys to select entry of **Date**, **Time**, **Hard Disk(C/D)**, **Floppy**, **Display** and **Keyboard**.
2. Use **PgUp/PgDn** key to modify the option of each entry.
3. Use **Esc** to exit.

The Award BIOS supports three HDD modes: **NORMAL**, **LBA**, and **LARGE**.

**NORMAL mode:** Generic access mode in which neither the BIOS nor the IDE controller will make any transformation during accessing. The maximum HDD size supported by the **NORMAL** mode is 528 Megabytes.

**LBA mode:** Logical Block Addressing mode is a new HDD accessing method to overcome the 528 Megabytes bottleneck. The number of cylinders, heads, and sectors shown in setup may not be the number physically contained in the HDD. During HDD accessing, the IDE controller will transform the logical address described by cylinder, head, and sector number into its own physical address inside the HDD. The maximum HDD size supported by the LBA mode is 8.4 Gigabytes.

**LARGE mode:** Some IDE HDDs contain more than 1024 cylinders without LBA support. This access mode tricks DOS (or other OS) that the number of cylinders is less than 1024 by dividing it by 2. At the same time, the number of heads is multiplied by 2. The maximum HDD size supported by LARGE mode is 1 Gigabytes.

Standard CMOS Setup	Advanced BIOS Features
Integrated Peripherals	Load BIOS Defaults
Exit Setup	Help

## 3.2 BIOS Features Setup Menu

The BIOS Features setup program is equipped with a series of help screens and accessed by the <F1> key, which will display the available options for a particular configuration feature and special help for some of the options. If you don't really understand the meanings of each item, please don't change the following default values.

ROM ISA BIOS (XXXXXXXX) BIOS FEATURES SETUP AWARD SOFTWARE, INC.			
Typematic Rate Setting	: Enabled	Video BIOS Shadow	: Enabled
Typematic Delay (Msec)	: 250	C8000-CFFFF Shadow	: Disabled
Typematic Rate (Chars/Sec)	: 30	D0000-D7FFF Shadow	: Disabled
Quick Power on Self Test	: Enabled	D8000-DFFFF Shadow	: Disabled
Memory Parity Check	: Enabled		
IDE HDD Block Mode	: Disabled		
Boot Up NumLock Status	: On		
Boot Up Floppy Seek	: Disabled		
Swap Floppy Drive	: Disabled		
Boot Sequence	: A, C		
Boot Up System Speed	: High		
Security Option	: Setup		
Virus Warning	: Enabled		
External Cache	: Enabled		
CPU Internal Cache	: Enabled		
		Esc : Quit F1 : Help F5 : Old Values (Shift) F6 : Load BIOS Defaults F7 : Load Setup Defaults	
		↓ ↑ → ← : Select Item PU/PD/+/-: Modify F2 : Color	

Figure 3-3 BIOS Feature Setup

A short description of screen items follows:

- |                                   |  |
|-----------------------------------|--|
| <b>Typematic Rate Setting</b>     | Enable this option to adjust the keystroke repeat rate.                  |
| <b>Typematic Delay (Msec)</b>     | Choose how long after you press a key that a character begins repeating. |
| <b>Typematic Rate (Chars/Sec)</b> | Choose the rate a Character keeps repeating.                             |

<b>Quick Power On Self Test</b>	Enabled provides a fast POST at boot-up
<b>Memory Parity Check</b>	Enable this option for a Normal memory parity check. Disabled ignores memory parity check.
<b>IDE HDD Block Mode</b>	This option enables/disables the IDE HDD Block Mode function. Older HDDs do not support this function. (The Default setting is Disabled.)
<b>Boot Up Num Lock Status</b>	Choose On or Off. On puts numeric keypad in Num Lock mode at boot-up. Off puts this keypad in arrow key mode at boot-up.
<b>Boot Up Floppy Seek</b>	Enable this item and the BIOS searches for installed floppy disk drives to determine if they are 40 tracks (360K drive) or 80 tracks (760K, 1.2M, or 1.44M drives). Disable this item and the BIOS does not search for floppy drive type by track number.
<b>Swap Floppy Drive</b>	Enabled changes the sequence of the A: and B: drives. (The Default setting is Disabled.)
<b>Boot Sequence</b>	The default setting attempts to first boot from drive A: and then from hard disk C:. You can reverse this sequence with "C: A:", but then drive A: cannot boot directly.
<b>Boot Up System Speed</b>	Choose High or Low. This item selects the speed the system runs immediately after power up.
<b>Security Option</b>	Choose Setup or System. Use this feature to prevent unauthorized system boot-up or use of BIOS Setup.  "System" - Each time the system is booted the password prompt appears.  "Setup" - If a password is set, the password prompt only appears if you attempt to enter the Setup program.

- Virus Warning** Enable this option and a warning message appears when anything attempts to access the boot sector or hard disk partition table.
- External Cache** This option enables/disables the external cache memory. (The Default setting is Enabled.)
- CPU Internal Cache** This option enables/disables the CPU's internal cache. (The Default setting is Enabled.)
- Video or Adaptor BIOS Shadow** BIOS shadow copies BIOS code from slower ROM to faster RAM. BIOS can then execute from RAM. These 32K segments can be shadowed from ROM to RAM. BIOS is shadowed in a 32K segment if it is enabled and it has BIOS present .

### 3.3 Chipset Features Setup Menu

The Chipset Features Setup option changes the values of the chipset registers. These registers control system options in the computer.

**Caution:** *Do not change the default values shown below unless you are familiar with the mainboard's chipset.*

Run the Chipset Features Setup as follows.

1. Choose "CHIPSET FEATURES SETUP" from the Main Menu and the following screen appears.

ROM ISA BIOS (XXXXXXXXXX) CHIPSET FEATURES SETUP AWARD SOFTWARE, INC.	
Auto Configuration	: Enabled
Bus Clock Option	: 1/6 CLKIN
DRAM Speed Option	: Slowest
DRAM Write Wait State	: 1WS
DRAM Write CAS Width	: 2T
Cache write cycle	: 3T
Cache Burst Read Cycle	: 2T
Latch Local Bus Device	: T3
DRAM Write Burst	: Disable
Slow Refresh	: Disable
Hidden Refresh	: Enable
Int. Cache Scheme	: Write Thru
Memory Hole Size	: None
DMA Clock Select	: 4MHz
MA Drive Capacity	: 24mA
Local Bus Transparent	: Synchronize
System BIOS Cacheable	: Non-Cacheable
Video BIOS Cacheable	: Cacheable
<div style="display: flex; justify-content: space-between; align-items: center;"> <div> Esc : Quit  F1 : Help  F5 : Old Values (Shift)  F6 : Load BIOS Defaults  F7 : Load Setup Defaults </div> <div style="text-align: center;"> ↓ ↑ → ←  PU/PD/+/- : Modify </div> <div> : Select Item </div> </div>	

**Figure 3-4 Chipset Feature Setup Menu**

2. Use the arrow keys to move between items and select values. Modify selected fields using the PgUp/PgDn/ +/- keys.
3. After you have finished with the Chipset Features Setup, press the <ESC> key and follow the screen instructions to save or disregard your settings.

### 3.4 Power Management Setup

The Power Management Setup option lets you set the system's power saving functions.

#### Power Management Setup for SL-Enhanced CPU

Run the PowerManagement Setup on SL-Enhanced CPU (SMI CPU) as follows.

ROM ISA BIOS (XXXXXXXXXX) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.			
Power Management	: Disable	IRQ 6 (Floppy Disk)	: Enable
PM Control by APM	: No	IRQ 7 (LPT or LAN)	: Enable
Video Off Method	: V/H SYNC + Bank	IRQ 8 (RTC, OS2)	: Enable
Video Off Option	: Always On	IRQ 9 (Reserved)	: Enable
** PM Timers **		IRQ 10 (Reserved)	: Enable
HDD Power Down	: Disable	IRQ 11 (Reserved)	: Enable
System Doze	: Disable	IRQ 12 (Reserved)	: Enable
System Standby	: Disable	IRQ 14 (Hard Disk)	: Enable
System Suspend	: Disable	IRQ 15 (Reserved)	: Enable
** PM Event **			
Local Master	: Disable		
Local Device	: Disable		
Video Activities	: Disable		
DMA Activities	: Enable		
IRQ 1 (Keyboard)	: Enable		
IRQ 3 (COM 2)	: Enable		
IRQ 4 (COM1)	: Enable		
IRQ 5 (LPT or LAN)	: Enable		
		Esc : Quit      ↓ ↑ ← → : Select Item	
		F1 : Help      PУ/PD/ +/- : Modify	
		F5 : Old Values      (Shift) F2 : Color	
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

**Figure 3-5 Power Management screen for SL-Enhanced CPU**

A short description of selected screen items follows:

#### **Power**

Options are as follows:

#### **Management**

##### **User Define**

You define system power down times.

##### **Disabled**

Disables the Green PC Features.  
(Default)

##### **Min Saving**

Doze = 3 Hr  
Standby = 3 Hr  
Suspend = 3 Hr

**Max Saving**      Doze = 10 Sec  
                         Standby = 10 Sec  
                         Suspend = 10 Sec

**PM Control by APM**      Choose No (Default) or Yes. APM stands for Advanced Power Management. "Yes" makes your power management more flexible.

**Video Off Method**      Choose V/H Sync + Blank (Default) or Blank screen. With this item V/H SYNC is controlled by software. If you have a VGA card that is not compatible with this option, switch to "Blank screen", even though it consumes more power than "V/H SYNC + Blank".

**Video Off Option**      Choose Always On (Default), Suspend -- Off, or Susp, Stby -- Off. This item shuts the video off when entering Suspend, Standby or Doze mode.

**HDD Power Down**      Choose a time interval from 1 to 15 minutes or Disabled (Default). When the set time has elapsed, the BIOS sends a command to the HDD to enter standby (sleep) mode, turning off the motor. This function is only valid for IDE HDDs that support power saving function.

**System Doze**      The default setting is Disabled. You can select time interval from 10 sec to 3Hrs. When the set time elapses without any PM event activity (Local Master, Local Device, Video Activities and DMA Activities, IRQn) the system enters Doze mode.

In Doze mode, the system slows down (Deturbo). If the "Video Off Option" is set to "Always On", the screen will shut off.

**System Standby**      The default setting is Disabled. You can select time interval from 10 sec to 3Hrs. When the set time elapses without any PM event activity the system enters Standby mode.

In Standby mode, the system slow down (Deturbo), and SM Out changes to low. If the "Video Off Option" is set to "Susp, Stby -- Off", the screen will shut off.

<b>System Suspend</b>	<p>The default setting is Disabled. You can select time interval from 10 sec to 3Hrs. When the set time elapses without any PM event activity the system enters Standby mode.</p> <p>In Suspend mode, the system slows down (Deturbo), SM Out changes to low, and the motherboard system frequency drops to 8MHz (SL enhanced CPUs drop to 0MHz). If the "Video Off Option" is set to "Suspend — Off", the screen will shut off.</p>
<b>Local Master (Device)</b>	<p>Choose Enabled or Disabled (Default). If Enabled the VESA Local Master (Device) card is monitored.</p>
<b>Video Activities</b>	<p>Choose Enabled or Disabled (Default). If Enabled video activities are monitored.</p>
<b>DMA Activities</b>	<p>This item should always be Enabled (Default).</p>
<b>IRQn</b>	<p>Enabled is the default setting for IRQ 8, the other IRQ defaults are Disabled.</p>

## **Power Management Setup for Normal CPU**

Run the Power Management Setup on Normal CPU (Non-SMI CPU) as follows.

There are two methods IRQ or Chipset of dealing with the Power Management on Normal CPU (Non-SMI CPU). You can select a method by follow function.

**PM Mode** Choose Chipset, IRQ15 or IRQ12 (Default). If your system use DOS. We suggest you to select "IRQ15" or "IRQ12". If your system use other operating system (OS/2, UNIX, .... etc.), you only can select "Chipset".

1. Select PM Mode by IRQ and a screen with a list of items appears.

## BIOS Setup

ROM ISA BIOS (XXXXXXXXXX) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.			
Power Management	: Disable	IRQ 5 (LPT or LAN)	: Enable
PM Mode	: IRQ12	IRQ 6 (Floppy Disk)	: Enable
PM Control by APM	: No	IRQ 7 (LPT or LAN)	: Enable
Video Off Method	: V/H SYNC + Bank	IRQ 8 (RTC,OS2)	: Enable
Video Off Option	: Always On	IRQ 9 (Reserved)	: Enable
<b>** PM Timers **</b>		IRQ 10 (Reserved)	: Enable
HDD Power Down	: Disable	IRQ 11 (Reserved)	: Enable
System Doze	: Disable	IRQ 12 (Reserved)	: Enable
System Standby	: Disable	IRQ 14 (Hard Disk)	: Enable
System Suspend	: Disable	IRQ 15 (Reserved)	: Enable
<b>** PM Event **</b>			
Local Master	: Disable	Esc : Quit                      ↓ ↑ → ← : Select Item F1 : Help                      PU/PD/ +/- : Modify F5 : Old Values                (Shift) F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults	
Local Device	: Disable		
Video Activities	: Disable		
DMA Activities	: Enable		
IRQ 1 (Keyboard)	: Enable		
IRQ 3 (COM 2)	: Enable		
IRQ 4 (COM1)	: Enable		

**Figure 3-6 Power Management screen for Normal CPU**

All option and function in Figure 3-6 is same as in Figure 3-5.

2. Select PM Mode by Chipset and a screen with a list of items appears.

ROM ISA BIOS (XXXXXXXXXX) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.			
Power Management	: Disable	IRQ 7 (LPT or LAN)	: Enable
PM Mode	: Chipset	IRQ 8 (RTC,OS2)	: Enable
<b>** PM Timers **</b>		IRQ 9 (Reserved)	: Enable
HDD Power Down	: Disable	IRQ 10 (Reserved)	: Enable
System Standby	: Disable	IRQ 11 (Reserved)	: Enable
<b>** PM Event **</b>		IRQ 12 (Reserved)	: Enable
Local Master	: Disable	IRQ 14 (Hard Disk)	: Enable
Local Device	: Disable	IRQ 15 (Reserved)	: Enable
Video Activities	: Disable	Esc : Quit                      ↓ ↑ → ← : Select Item F1 : Help                      PU/PD/ +/- : Modify F5 : Old Values                (Shift) F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults	
DMA Activities	: Enable		
IRQ 1 (Keyboard)	: Enable		
IRQ 3 (COM 2)	: Enable		
IRQ 4 (COM1)	: Enable		
IRQ 5 (LPT or LAN)	: Enable		
IRQ 6 (Floppy Disk)	: Enable		

**Figure 3-7 Power Management screen for Normal CPU**

Comparing with Figure 3-6, Figure 3-7 is less on "System Doze, System Suspend, Video Off Method and Video Off Option".

All option and function in Figure 3-7 is same as in Figure 3-6, except the function of Standby mode. The Standby mode in Figure 3-7 means: motherboard system frequency downs to 8MHz, and Display be off by hardware (SM Out) only. About SM Out connection, please refer Hardware Setup for more details(Page 2-3).

### 3.5 Load BIOS Default

BIOS Default indicates the values required by the system for the minimum performance. Choose this item and the following message appears:

“Load BIOS Defaults (Y/N)? N”

To use the BIOS defaults, change the prompt to “Y” and press <Enter>.

### 3.6 Load Setup Defaults

Setup Default indicates the most appropriate value of the system parameter which the system would be in maximum performance. Choose this item and the following message appears:

“Load SETUP Defaults (Y/N)? N”

To use the SETUP defaults, change the prompt to “Y” and press <Enter>.

### 3.7 Password Setting

This Main Menu item lets you configure the system so that a password is required every time the system boots or an attempt is made to enter the Setup program. Change the password as follows:

1. Choose "PASSWORD SETTING" in the Main Menu and press < Enter > . The following message appears:

"Enter Password:"

2. Enter a password and press < Enter > .

(If you do not wish to use the password function, you can just press < Enter > and a "Password disabled" message appears.)

3. After you enter your password, the following message appears prompting you to confirm the new password:

"Confirm Password:"

4. Re-enter your password and then Press < ESC > to exit to the Main Menu.

**Important:** If you forget or lose the password, the only way to access the system is to set jumper JP21 to clear the CMOS RAM. All setup information is lost and you must run the BIOS setup program again.

### 3.8 IDE HDD Auto Detection

This Main Menu item automatically detects the hard disk type and configures the STANDARD CMOS SETUP accordingly.

### 3.9 Standard type of hard disk

Type	Size	Cylinders	Heads	W- Pcomp	L- Zone	Sect
1	10MB	306	4	128	305	17
2	20MB	615	4	300	615	17
3	30MB	615	6	300	615	17
4	62MB	940	8	512	940	17
5	81MB	977	10	65535	977	17
6	122MB	919	16	65535	919	17
7	163MB	1011	15	65535	1011	22
8	258MB	944	14	65535	944	40
9	201MB	723	15	65535	723	38
10	20MB	820	3	65535	820	17
11	35MB	855	5	65535	855	17
12	49MB	855	7	65535	855	17
13	20MB	306	8	128	319	17
14	42MB	733	7	65535	733	17
16	20MB	612	4	0000	663	17
17	40MB	977	5	300	977	17
18	56MB	977	7	65535	977	17
19	59MB	1024	7	512	1023	17
20	30MB	733	5	300	732	17
21	42MB	733	7	300	732	17
22	30MB	733	5	300	733	17
23	10MB	306	4	0000	336	17
24	53MB	925	7	0000	925	17
25	69MB	925	9	65535	925	17
26	43MB	754	7	754	754	17
27	68MB	754	11	65535	754	17
28	40MB	699	7	256	699	17
29	68MB	823	10	65535	823	17
30	53MB	918	7	918	918	17
31	93MB	1024	11	65535	1024	17
32	127MB	1024	15	65535	1024	17
33	42MB	1024	5	1024	1024	17
34	10MB	612	2	128	612	17
35	76MB	1024	9	65535	1024	17
36	68MB	1024	8	512	1024	17
37	40MB	615	8	128	615	17
38	24MB	987	3	987	987	17
39	57MB	987	7	987	987	17
40	40MB	820	6	820	820	17
41	40MB	977	5	977	977	17
42	40MB	981	5	981	981	17
43	48MB	830	7	512	830	17
44	68MB	830	10	65535	830	17
45	114MB	917	15	65535	918	17
46	152MB	1224	15	65535	1223	17

Item	Model	Capacity	Format	Speed	Interface	Notes
1	ST31600L	1600	528	5400	IDE	
2	ST3200L	200	528	5400	IDE	
3	ST3400L	400	528	5400	IDE	
4	ST3600L	600	528	5400	IDE	
5	ST3800L	800	528	5400	IDE	
6	ST31000L	1000	528	5400	IDE	
7	ST31200L	1200	528	5400	IDE	
8	ST31400L	1400	528	5400	IDE	
9	ST31600L	1600	528	5400	IDE	
10	ST31800L	1800	528	5400	IDE	
11	ST32000L	2000	528	5400	IDE	
12	ST32200L	2200	528	5400	IDE	
13	ST32400L	2400	528	5400	IDE	
14	ST32600L	2600	528	5400	IDE	
15	ST32800L	2800	528	5400	IDE	
16	ST33000L	3000	528	5400	IDE	
17	ST33200L	3200	528	5400	IDE	
18	ST33400L	3400	528	5400	IDE	
19	ST33600L	3600	528	5400	IDE	
20	ST33800L	3800	528	5400	IDE	
21	ST34000L	4000	528	5400	IDE	
22	ST34200L	4200	528	5400	IDE	
23	ST34400L	4400	528	5400	IDE	
24	ST34600L	4600	528	5400	IDE	
25	ST34800L	4800	528	5400	IDE	
26	ST35000L	5000	528	5400	IDE	
27	ST35200L	5200	528	5400	IDE	
28	ST35400L	5400	528	5400	IDE	
29	ST35600L	5600	528	5400	IDE	
30	ST35800L	5800	528	5400	IDE	
31	ST36000L	6000	528	5400	IDE	
32	ST36200L	6200	528	5400	IDE	
33	ST36400L	6400	528	5400	IDE	
34	ST36600L	6600	528	5400	IDE	
35	ST36800L	6800	528	5400	IDE	
36	ST37000L	7000	528	5400	IDE	
37	ST37200L	7200	528	5400	IDE	
38	ST37400L	7400	528	5400	IDE	
39	ST37600L	7600	528	5400	IDE	
40	ST37800L	7800	528	5400	IDE	
41	ST38000L	8000	528	5400	IDE	
42	ST38200L	8200	528	5400	IDE	
43	ST38400L	8400	528	5400	IDE	
44	ST38600L	8600	528	5400	IDE	
45	ST38800L	8800	528	5400	IDE	
46	ST39000L	9000	528	5400	IDE	
47	ST39200L	9200	528	5400	IDE	
48	ST39400L	9400	528	5400	IDE	
49	ST39600L	9600	528	5400	IDE	
50	ST39800L	9800	528	5400	IDE	

# A. AN4(T) R2 V1.1 Series mother-board CPU select diagram. (U26)

Page: 1

CPU Type	JP8	JP9	JP10	JP11	JP12	JP26	JP27	JP28	JP29	JP30	JP31	JP33	JP34	JP35	JP36	JP38	JP39	JP43	JP47	JP48	JP53	JP54	JP55	JP56	JP63
Intel:																									
486SX-20	2-3	2-3	OFF	OFF	2-3	ON	OFF	1-2	ON	2-3	OFF	OFF	OFF	OFF	OFF	1-2	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486SX/SL-25	2-3	2-3	OFF	OFF	2-3	OFF	ON	1-2	ON	2-3	OFF	OFF	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486SX/SL-33	2-3	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	2-3	OFF	OFF	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX/SL-33	2-3	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX-50	2-3	2-3	OFF	OFF	2-3	ON	OFF	1-2	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2/SL-50	2-3	2-3	OFF	OFF	2-3	OFF	ON	1-2	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2/SL-66	2-3	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX4/SL-75	2-3	1-2	OFF	1-2	1-2	OFF	ON	OFF	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	ON	OFF	OFF	OFF	OFF
486DX4/SL-100	2-3	1-2	OFF	1-2	1-2	ON	ON	OFF	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	ON	OFF	OFF	OFF
AND:																									
486DX-40 C VERSION	2-3	2-3	OFF	OFF	2-3	OFF	OFF	OFF	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2-50 C VERSION	2-3	2-3	OFF	OFF	2-3	OFF	ON	OFF	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2-66 C VERSION	2-3	2-3	OFF	OFF	2-3	ON	ON	OFF	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX-40 D VERSION	2-3	2-3	OFF	OFF	2-3	OFF	OFF	OFF	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2-50 D VERSION	2-3	2-3	OFF	OFF	2-3	OFF	ON	OFF	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2-66 D VERSION	2-3	2-3	OFF	OFF	2-3	ON	ON	OFF	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX-40 E VERSION	2-3	2-3	OFF	OFF	2-3	OFF	OFF	1-2	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2-50 E VERSION	2-3	2-3	OFF	OFF	2-3	OFF	ON	1-2	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2-66 E VERSION	2-3	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DXL-40	2-3	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DXL2-50	2-3	2-3	OFF	OFF	2-3	OFF	OFF	1-2	ON	1-2	1-2, 3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DXL2-66	2-3	2-3	OFF	OFF	2-3	OFF	ON	1-2	ON	1-2	1-2, 3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DXL2-80	2-3	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	1-2	1-2, 3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DXL2-80 (3.3V)	2-3	1-2	OFF	2-3	1-2	OFF	OFF	1-2	ON	1-2	1-2, 3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2-50 (3.3V)	2-3	1-2	OFF	2-3	1-2	OFF	ON	1-2	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	ON	OFF	OFF	OFF	OFF
486DX2-66 (3.3V)	2-3	1-2	OFF	2-3	1-2	ON	ON	1-2	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	ON	OFF	OFF	OFF	OFF
486DX2-80 (3.3V)	2-3	1-2	OFF	2-3	1-2	OFF	OFF	1-2	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	ON	OFF	OFF	OFF
486DX4-100 (3.45V)	2-3	1-2	OFF	1-2	1-2	ON	ON	OFF	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	ON	OFF	OFF	OFF

CPU Type	JP8	JP9	JP10	JP11	JP12	JP26	JP27	JP28	JP29	JP30	JP31	JP33	JP34	JP35	JP36	JP38	JP39	JP43	JP47	JP48	JP53	JP54	JP55	JP56	JP63
Cyril:																									
W7DX-33	2-3	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	OFF	OFF	OFF
W7DX-40	2-3	2-3	OFF	OFF	2-3	OFF	OFF	1-2	ON	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	OFF	OFF	OFF
W7DX-50	2-3	2-3	OFF	OFF	2-3	ON	OFF	1-2	OFF	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	OFF	OFF	OFF
W7DX2-50	2-3	2-3	OFF	OFF	2-3	OFF	ON	1-2	ON	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	OFF	OFF	OFF
W7DX2-60	2-3	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	OFF	OFF	OFF
W7DX2-80	2-3	2-3	OFF	OFF	2-3	OFF	OFF	1-2	ON	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	OFF	OFF	OFF
W7DX2-V50	2-3	1-2	OFF	OFF	1-2	OFF	ON	1-2	ON	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	ON	OFF	OFF	OFF	OFF
W7DX2-V60	2-3	1-2	OFF	OFF	1-2	ON	ON	1-2	OFF	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	ON	OFF	OFF
W7DX2-V80	2-3	1-2	OFF	OFF	1-2	OFF	OFF	1-2	ON	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	OFF	ON	OFF
UNC:																									
US5-33	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	2-3	1-2	OFF	4-5	3-4	2-3	3-4	3-4	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
US5-40	2-3	2-3	OFF	OFF	2-3	OFF	OFF	1-2	ON	2-3	1-2	OFF	4-5	3-4	2-3	3-4	3-4	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF

# B. AN4(T) R2 V1.1 Series mother-board CPU select diagram. (U27)

Page: 3

CPU Type	JP8	JP9	JP10	JP11	JP12	JP26	JP27	JP28	JP29	JP30	JP31	JP33	JP34	JP35	JP36	JP38	JP39	JP43	JP47	JP48	JP53	JP54	JP55	JP56	JP63
Intel:																									
486SX-20	1-2	2-3	OFF	OFF	2-3	OFF	OFF	1-2	OFF	2-3	OFF	OFF	OFF	OFF	OFF	1-2	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486SX/SL-25	1-2	2-3	OFF	OFF	2-3	OFF	ON	1-2	OFF	2-3	OFF	OFF	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486SX/SL-33	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	ON	2-3	OFF	OFF	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX/SL-33	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX-50	1-2	2-3	OFF	OFF	2-3	OFF	OFF	1-2	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2/SL-50	1-2	2-3	OFF	OFF	2-3	OFF	ON	1-2	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2/SL-66	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX4/SL-75	1-2	1-2	OFF	1-2	1-2	OFF	ON	OFF	ON	OFF	1-2	3-4	ON	4-5	3-4	OFF	OFF	2-3	2-3	1-2	ON	OFF	OFF	OFF	OFF
486DX4/SL-100	1-2	1-2	OFF	1-2	1-2	ON	ON	OFF	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	ON	OFF	OFF	OFF
AMD:																									
486DX-40 C VERSION	1-2	2-3	OFF	OFF	2-3	ON	ON	OFF	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2-50 C VERSION	1-2	2-3	OFF	OFF	2-3	OFF	ON	OFF	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2-66 C VERSION	1-2	2-3	OFF	OFF	2-3	ON	ON	OFF	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX-40 D VERSION	1-2	2-3	OFF	OFF	2-3	ON	ON	OFF	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2-50 D VERSION	1-2	2-3	OFF	OFF	2-3	ON	ON	OFF	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2-66 D VERSION	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX-40 E VERSION	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2-50 E VERSION	1-2	2-3	OFF	OFF	2-3	OFF	ON	1-2	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DX2-66 E VERSION	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DXL-40	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	ON	1-2	1-2, 3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DXL2-50	1-2	2-3	OFF	OFF	2-3	OFF	ON	1-2	OFF	1-2	1-2, 3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
486DXL2-66	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	1-2	1-2, 3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	ON
486DXL2-80	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	ON	1-2	1-2, 3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	ON
486DXL2-90	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	1-2	1-2, 3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	ON
486DX-40 (3.3V)	1-2	1-2	OFF	2-3	1-2	ON	ON	1-2	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	ON	OFF	OFF	OFF	OFF
486DX2-50 (3.3V)	1-2	1-2	OFF	2-3	1-2	OFF	ON	1-2	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	ON	OFF	OFF	OFF	ON
486DX2-66 (3.3V)	1-2	1-2	OFF	2-3	1-2	ON	ON	1-2	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	ON	OFF	OFF	OFF	ON
486DX2-80 (3.45V)	1-2	1-2	OFF	2-3	1-2	ON	ON	1-2	OFF	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	ON	OFF	OFF	ON
486DX4-100 (3.45V)	1-2	1-2	OFF	1-2	1-2	ON	ON	OFF	ON	1-2	3-4	ON	4-5	3-4	2-3	OFF	OFF	2-3	2-3	1-2	OFF	ON	OFF	OFF	OFF

CPU Type	JP8	JP9	JP10	JP11	JP12	JP26	JP27	JP28	JP29	JP30	JP31	JP33	JP34	JP35	JP36	JP38	JP39	JP43	JP47	JP48	JP53	JP54	JP55	JP56	JP63
Ctrl:																									
W70X-33	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	ON	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	OFF	OFF	OFF
W70X-40	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	OFF	OFF	OFF
W70X-50	1-2	2-3	OFF	OFF	2-3	OFF	OFF	1-2	ON	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	OFF	OFF	OFF
W70X2-50	1-2	2-3	OFF	OFF	2-3	OFF	ON	1-2	OFF	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	OFF	OFF	OFF
W70X2-66	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	ON	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	OFF	OFF	OFF
W70X2-80	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	OFF	OFF	OFF
W70X2-V50	1-2	1-2	OFF	OFF	1-2	OFF	ON	1-2	OFF	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	ON	OFF	OFF	OFF	OFF
W70X2-V66	1-2	1-2	OFF	OFF	1-2	ON	ON	1-2	ON	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	ON	OFF	OFF
W70X2-V80	1-2	1-2	OFF	OFF	1-2	ON	ON	1-2	OFF	1-2	3-4	ON	2-3	2-3	1-2, 3-4	2-3	2-3	1-2	1-2	2-3	OFF	OFF	OFF	ON	OFF
UNC:																									
USS-33	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	ON	2-3	1-2	OFF	4-5	3-4	2-3	3-4	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF
USS-40	1-2	2-3	OFF	OFF	2-3	ON	ON	1-2	OFF	2-3	1-2	OFF	4-5	3-4	2-3	3-4	OFF	2-3	2-3	1-2	OFF	OFF	OFF	OFF	OFF

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